S/033/61/038/001/019/019
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Second Meeting of the Commission on the Physics of Stars and Nebulae

The fifth session was concerned with the new telescopes and was chaired by the Corresponding Member AS USSR O. A. Mel'nikov. Among the papers read at this session were the following: V. B. Nikonov spoke in some detail on the 260 cm telescope mentioned above. V. A. Ambartsumyan spoke on the 100 cm Schmidt telescope of the Byurakan Observatory. O. A. Mel'nikov, V. V. Sobolev, and S. B. Pikel'ner took part in the discussion of these new designs.

The last session was chaired by V. A. Ambartsumyan and was concerned with studies of nebulae and planning of further work in this field. The following persons took part in the discussion: G. A. Gurzadyan (Byurakan Astrophysical Observatory), R. Ye. Gershberg (Crimean Astrophysical Observatory), N. A. Razmadze (Abastuman Astrophysical Observatory), D. A. Rozhkovskiy (Institute of Astrophysics AS KazSSR), E. V. Turchaninova (Astronomical Observatory, Kiyev University) and V. P. Shcheglov (State Astronomical Institute imeni P. K. Shternberg).

The following recommendations were made:

1) The work by the various institutions in the field of nebular

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studies should be coordinated.
2) A "service" of the most interesting objects should be organized.
3) New methods should be developed, in particular those using image converters.
4) Polarization observations of nebulae should be organized at the Criman Astrophysical Observatory.
The meeting was organized by the Byurakan Observatory and G. A. Gurzadyan and the scientific secretary of the observatory, Candidate of Physico-Mathematical Sciences E. Ye. Khachikyan were thanked for their "excellent work".

SUBMITTED: November 26, 1960

Card 7/7

AGEKYAN, T.A.; VORONTSOV-VEL'YAMINOV, B.A.; GORBATSKIY, V.G.; DEYCH, A.N.; KRAT, V.A.; MEL'NIKOV, O.A.; SOBOLEV, V.V.; MIKHAYLOV, A.A., otv. red.; KULIKOV, G.S., red.; AKSEL'ROD, I.Sh., tekhn. red.

[Course on astrophysics and stellar astronomy]Kurs astrofiziki i zvezdnoi astronomii. 2. izd. Moskva, Fizmatgiz. Vol.2. [By]T.A. Agekian i dr. 1962. 688 p. (MIRA 16:1)
(Astrophysics) (Stars) (Nebulae)

GORBATSKIY, V.G.

Chemical composition of novae envelopes. Uch.zap.LGU no.307:45-51 '62. (MIRA 15:9)

(Stars, New)

GORBATSKIY, V.G.

Luminescence of the shell of a nova behind the front of a shock wave. Vest. LGU 17 no.19:112-123 '62. (MIRA 15:10)
(Stars, New)

GORBATSKIY, V.G. (Leningrad)

Academician Viktor Amazaspovich Ambartsumian. Fiz.v shkole 22 no.5:14-18 S-O '62. (MIRA 15:12)
(Ambartsumian, Viktor Amazaspovich, 1908-)

GORBATSKIY, V.G.

Dynamics of the envelopes of novae. Astron.zhur. 39 no.2: 198-208 Mr-Ap '62. (MIRA 15:3)

1. Astronomicheskaya observatoriya Leningradskogo gosudarstvennogo universiteta.

(Stars, New)

GORBATSKIY, V.G.

Light emission of long-period variable stars. Dokl.AN SSSR 144 no.4:738-741 Je '62. (MIRA 15:5)

1. Leningradskiy gosudarstvennyy universitet im. A.A.Zhdanova. Predstavleno akademikom V.A.Ambartsumyanom.
(Stars, Variable)

PHASE I BOOK EXPLOITATION SOV/6434

Gorbatskiy, V. G., and I. N. Minin

Nestatsionarnyye zvezdy (Unstable Stars) Moscow, Fizmatgiz, 1963. 355 p. (Series: Problemy teoreticheskoy astrofiziki) 2000 copies printed.

Editorial Board of the Series: V. A. Ambartsumyan, E. R. Mustel', A. B. Severnyy, and V. V. Sobolev; Ed.: G. S. Kulikov; Tech. Ed.: I. Sh. Aksel'rod.

PURPOSE: This book is intended for astronomers and astrophysicists.

COVERAGE: Unstable stars, including novae, supernovae, Wolf-Rayet, and Be-types, are investigated on the basis of their emission characteristics. Shell dynamics during flareup are examined. The instability of the stars is interpreted chiefly on the basis of the structure of the outer layers, since little data is available on the interior of such stars. Some attention is given to the application of gasdynamics and electrodynamic techniques

Card 1/6

GORBATSKIY, V.G.; NIKITIN, A.A.

Nitrogen and oxygen abundance in envelopes of novae. Astron. zhur. 40 no.5:865-867 S-O '63. (MIRA 16:11)

1. Astronomicheskaya observatoriya Leningradskogo gosudarstvennogo universiteta.

ACCESSION NR: AP4017612 S/0033/64/041/001/0053/0062

AUTHOR: Gorbatskiy, V. G.

TITLE: Transfer of energy released from a point explosion in a star

SOURCE: Astronomicheskiy zhurnal, v. 41, no. 1, 1964, 53-62

TOPIC TAGS: star, nova eruptive star, dM type star, energy liberation, energy, energy propagation

ABSTRACT: Flares of novae and eruptive stars of other types are frequently related to an explosion-like liberation of a large quantity of energy in the central portion of the star. If the explosion is sufficiently strong, the released energy is transferred to the outside by a shock wave. Also of interest is the examination of less intensive explosions which are accompanied by the liberation of a relatively small quantity of energy, with the resultant shock wave attenuating and becoming acoustical even at small distances from the point of the explosion. The result of such an explosion is the formation, within the star, of an approximately spherical region with lower matter density, the radius of this quasi-sphere being small in comparison with the radius of the star. If the explosion occurs not in the very center of the star, then an Archimidean force will be brought to bear on the sphere containing the energy, as a result of which this sphere will be shifted to the out-

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ACCESSION NR: AP4017612

side. In this article, the problem of the motion of the sphere, containing the energy released during the explosion is considered, in order to determine under what conditions this energy (that is, energy liberated at the time of a relatively weak explosion) can be transferred to the outer layers of the star in the manner described. The adiabatic expansion of the sphere and the radius variation, due to the propagation of a thermal wave, are both considered. Computations indicate that the proposed mechanism for the transfer of the explosion-released energy should be effective for dM type stars. The time necessary for the sphere to move from the central region of a dM4 type star to its outer strata is shown to be in the order of 10^4 seconds, assuming that the energy liberated is approximately 10^{33} ergs. Orig. art. has: 35 formulas.

ASSOCIATION: Leningradskiy gosudarstvenny*y universitet (Leningrad State University)

SUBMITTED: 22Apr63 DATE ACQ: 18Mar64 ENCL: 00

SUB CODE: AS NO REF SOV: 005 OTHER: 002

Card 2/2

GORBATSKIY, V.G.

Dislike envelopes in close binary systems and their effect on stellar spectra. Astron.zhur. 41 no.5:849-857 S-O '64.

1. Astronomicheskaya observatoriya Leningradskogo gosudarstvennogo universiteta. (MIRA 17:10)

GORBATSKIY, V.G.

Gas flows in eclipsing binary systems of dwarf stars. Uch.zap.LGU no.328:16-30 '65. (MIRA 18:10)

GORBATSKIY, V.G.

Effect of atom-electron collisions on Balmer line intensities in the spectra of moving star envelopes. Astrofizika 1 no.2: 129-142 Je. '65. (MIRA 18:10)

1. Leningradskiy gosudarstvennyy universitet.

VAKHURKIN, V.M.; GLADSHTEYN, L.I.; KARMILOV, S.S.; KLIMOV, S.A.; LEVITANSKIY, I.V.; MALININ, B.N.; NOSOV, A.K.; PAL'M, Yu.A.; POLYAK, V.S.; POPOV, G.D.; RASSUDOV, V.M.; KRASYUKOV, V.P.; SOKOLOV, A.G.; Prinimali uchastiye: GORBATSKIY, Ye.I.; MATVEYEV, S.S.; STRELETSKIY, N.S., prof., retsenzent; MUKHANOV, K.K., dots., retsenzent; BOLOTINA, A.V., red.; MIKHEYEVA, A.A., tekhn. red.

[Light-weight supporting metal structures] Oblegchennye nesushchie metallicheskie konstruktsii. Moskva, Gosstroiizdat, 1963. 282 p. (MIRA 17:2)

GORBATYUK, M. I.

Rectum - Tumors

Clinical observation and patho-morphology of malignant melanoma of the rectum, Arkhiv pat. 14, No. 2, 1952.

Monthly List of Russian Accessions, Library of Congress, October 1952, Unclassified

27 2400

S/169/61/000/012/055/089
D228/D305

AUTHORS: Gorbatyuk, N. V., and Timofeyev-Resovskiy, N. V.

TITLE: The limiting-permissible norms of the radioactive contamination of water and air. 1. The method of calculation and results of determining the permissible threshold contents of radioactive impurities in water from the experimental data of distribution tests

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 12, 1961, 19, abstract 12B127 (Tr. Ural'skogo otd. Mosk. o-va ispyt. prirody, 1959, no. 2, 163-181)

TEXT: A table of the permissible threshold contents of the main "fragmentary" isotopes in the skeleton, liver, lungs and other human organs has been compiled. A table of the limiting-

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S/169/61/000/012/055/089
D228/D305

The limiting-permissible...

permissible norms of the radioactive contamination of water by basic isotopes and by a natural mixture of the division products of different ages has been compiled on the basis of the obtained experimental data and calculations of the permissible threshold contents of isotopes. Norms have been calculated for different periods of water consumption - from 10 days to 40 years. [Abstracter's note: Complete translation.]

Card 2/2

GORBATYUK, N.V.; BORUKHOVICH, G.Z.; PARKHOMENKO, V.V.; CHASHINOV, A.V.

Rapid method of determining the ash content of coal from scattered β-radiation. Zav.lab. 26 no.9:1094-1096 '60. (MIRA 13:9)

1. Zavod "Krasnyy metallist".
(Coal--Analysis) (Beta rays)

31454

21.4500

S/626/60/000/012/009/010
D298/D303

AUTHORS: Gorbatyuk, N. V., and Timofeyev, A. N.

TITLE: The distribution of dispersed elements among the components of reservoirs. III. Stabilization of the radioactivity of a fresh solution of uranium fragments with its even entry into the reservoir, and the irradiation doses inside and outside the reservoir

PERIODICAL: Akademiya nauk SSSR. Ural'skiy filial. Institut biofiziki. Trudy. no. 12. Moscow, 1960. Sbornik rabot Laboratorii biofiziki. no. 2: Problemy biofiziki, 224-237

TEXT: The work presents a mathematical method for the approximate determination of the limit of accumulation of radioactivity in a reservoir with constant entry of the radioactive agent into the reservoir. The radiation doses arising within and without the reservoir are also determined. Within a certain time a dynamic balance will be achieved, i.e. the amount of radioactivity entering the reservoir will be balanced by the amount which has decayed in this

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The distribution of dispersed ...

period. The authors compute the level and time of stabilization for unseparated solutions of uranium fragments aged 30 and 180 days. The radioactivity of a solution accumulating constantly over t days is expressed in the equation:

$$B = \sum_{1}^{n} \int_{0}^{t} A_i dt \qquad (5)$$

where n = number of radioactive components in the solution, and A_i = radioactivity of i component per unit of time. A graph is plotted to show that stabilization occurs after 300 years at a level of 150-fold daily entry of a 30-day solution and 510-fold daily entry of a 180-day solution. The authors consider the case of a cylindrical reservoir with depth (H), base radius (a) and even distribution of radioactivity. To determine the gamma-radiation dose of such a

The distribution of dispersed ...

reservoir at a point M at a height (h_1) above its surface and distance b from the axis of its cylindrical volume, the whole volume is divided into cylindrical discs dz thick. The radiation from the volume is equal to the sum of the radiation from all the discs. On a disc situated at a distance h_2 from the surface a circular belt dr wide is isolated and the volumetric element of this disc, equal to dzds (ds = rd θdr) studied. At point M the radiation dose is equal to:

$$\Delta = K \cdot \rho \cdot dz \int_0^a \int_0^{2\pi} \frac{r \cdot dr \cdot d\theta e^{-(\mu_1 D_1 + \mu_2 D_2)}}{(h_1 + h_2)^2 + b^2 + r^2 - 2br \cos \theta} \qquad (8)$$

where D = distance of volumetric element from M; D_1 = the part of this distance in the air; D_2 = the part of this distance in the

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The distribution of dispersed ...

water; ρ = specific activity of the water; r = radius of circular belt on disc; K = gamma-constant of given radioactive agent; μ_1 = linear coefficient of radiation attenuation in the air; μ_2 = linear coefficient of radiation attenuation in water. Equations are also given for special cases where b = 0 and where $a \to \infty$. Various examples are plotted to demonstrate the method of approximate integration and to show that the intensity of the gamma-radiation dose above the surface of the reservoir tends toward its limit with a reservoir of radius 0.5 m. This indicates that the relationship of dose to radius is the same as that of dose to reservoir depth. The specific radioactivity of the water, as calculated by the method, will be lower than in reality since the calculations do not take into effect the manifold Compton scattering of radiation in thick layers of water, due to which the effective linear coefficient of attenuation should be greater. Equations are then given for calculating gamma-radiation above a reservoir of any radius ($a \geqslant 1$ m) in which the radioactivity of an unseparated solution of uranium fragments is evenly distributed. One meter above a reser-

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The distribution of dispersed ...

voir of infintely great radius (for practical purposes a $\geqslant$1 m) the gamma-radiation dose rises rapidly with an increase in depth to 10 cm; at 50 cm it tends toward its limit of ~0.15 r/hr for a 30-day solution and ~0.14 r/hr for a 180-day solution. The specific radioactivity of the water in such a reservoir causing the maximum permissible dose of radiation 1 meter above its surface would be 0.04 μc/l. A model experiment was performed to check the accuracy of the approximate calculations. A divergence of 17.4% was noted between the calculated values and the experimental findings. The authors give a formula for calculating the intensity of beta-radiation inside a reservoir with evenly distributed radioactivity from an unseparated solution of uranium fragments. The results show that the intensity of mixed beta- and gamma-radiation inside the reservoir is the same for solutions of 30 days or 180 days and comprises ~1.2 r/hr with a specific activity of the water of 1 μc/l and a depth above 0.5 m. The calculations enable one to determine the level of radioactivity of an unseparated solution of uranium fragments which accumulates over a certain period of time in a dumping pit for active waste, in an isolated reservoir or in any other storage

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The distribution of dispersed ...

body into which the radioactivity enters evenly. It enables the upper limit of accumulation to be determined and also the time which it takes for the radioactivity to be stabilized at this limit level. Gamma-radiation outside active reservoirs with linear dimensions >1 m will be the same for the same specific radioactivity of the water. At the edge of the pool at a height of 1 m this dose does not exceed the maximum permissible dose with a water radioactivity of 80 μc/l. With this same specific radioactivity, the intensity of beta- and gamma-radiation inside the reservoir comprises ~0.1 r/hr, i.e. 16 times the dose of gamma-radiation outside the reservoir. The authors recommend that these considerations be taken into account in designing purifying installations and reservoirs for deactivating radioactive waste waters. There are 7 figures, 2 tables and 9 references: 5 Soviet-bloc and 4 non-Soviet-bloc. The references to the English-language publications read as follows: C. Davisson a. R. Evans, Gamma-ray absorption coefficients. Rev. Mod. Phys., 24, 79, 1952; J. M. Hollander, J. Perlman a. G. T. Seaborg, Table of Isotopes. Rev. Mod. Phys., 25, 469, 1953; L. D. Marinelli,

Card 6/7

31454
S/626/60/000/012/009/010
D298/D303

The distribution of dispersed ...

R. F. Brinckerhoff a. G. J. Hine, Average energy of Beta-rays emitted by radioactive isotopes. Rev. Med. (?) Phys., 19, 25, 1947.

X

Card 7/7

DROZHZHIN, I.V.; GORBATYUK, N.V.; CHASHCHINOV, A.V.

Radiometric method for determining the ash content of coal.
Koks i khim. no.7:17-18 Jl '61. (MIRA 14:9)

1. Novo-Uzlovskaya ugleobogatitel'naya fabrika (for Drozhzhin).
2. Konotopskiy zavod "Krasnyy metallist" (for Gorbatyuk, Chashchinov).

(Coal--Analysis) (Radiometer)

GORBATYUK, N.V.

Determination of iron in ores from the scattering of β radiation.
Zav. lab. 29 no.6:730-732 '63. (MIRA 16:6)

1. Konotopskiy zavod "Krasnyy metallist".
(Iron ores)
(Beta rays—Industrial applications)
(Iron—Analysis)

LUKIN, V. (Moskva); POLOZOV I., elektromekhanik (Gomel'skaya oblast')
ZAMYATIN, K. (Sverdlovsk); NEYMAN, V. (Leningrad); GORBATYUK, S. (Grodno); BYKOV, L. (Moskva); SMIRNOV, B. (Gori); PEL'TSMAN I. (Leningrad)

Advices from experienced people. Za rul. 19 no. 2:14-15 F '61. (MIRA 14:4)

(Motor vehicles--Equipment and supplies)

GORBATYUK, V.A., inzh.

Electric strength of the insulation of electric machinery housing on diesel locomotives. Vest. TSNII MPS 24 no.4:43-47 '65.
(MIRA 18:7)

YURCHENKO, I.F.; OKUNEV, P.F., starshiy mekhanik; TOLKACHEV, V.P., inzh.; BYCHKOVSKIY, A.V., kand.tekhn.nauk; GORBATYUK, V.A., inzh.; LAGUN, Ya.I., starshiy inzh.; SHALIMOV, V.S., inzh.; DANILOV, V.I., inzh.

Replies to the inquiries of our readers. Elek. i tepl. tiaga 5 no.6:41-43 Je '61. (MIRA 14:10)

1. Nachal'nik Upravleniya truda, zarabotnoy platy i tekhniki bezopasnosti Ministerstva putey soobshcheniya (for Yurchenko). 2. Otdeleniye avtotormoznogo khozyaystva Vsesoyuznogo nauchno-issledovatel'skogo instituta zheleznodorozhnogo transporta Ministerstva putey soobshcheniya (for Okunev). 3. Otdel glavnogo tekhnologa Perovskogo zavoda po remonty elektropodvizhnogo sostava (for Lagun).

(Diesel locomotives)
(Railroads--Rolling stock)

PLATONOV, Ye.V., kand. tekhn. nauk; MIKHAILOV, V.P., kand. tekhn. nauk; GORBATYUK, V.A., inzh.; NIKUSHIN, A.I., inzh.

Analysis of the characteristics of the insulation of electric traction motors for diesel locomotives. Trudy TSNII MPS no.272: 5-49 '64. (MIRA 17:9)

SHAMOVSKIY, E.Kh.; ZYKOV, A.D.; KAFTANOVA, Z.K.; KRAVCHENKO, L.Ya.; FROLOV, N.P.; ZHURAVKIN, Ye.A.; GORBATYUK, V.L.

Mechanizing the flame scarfing of blooms. Metallurg 7 no.8:24-27 Ag '62. (MIRA 15:9)

1. Sibirskiy metallurgicheskiy institut i Kuznetskiy metallurgicheskiy kombinat.
(Steel ingots) (Metal cleaning)

GORBATYUK, V.T.

Fatigue strength of parts rebuilt by the weaving arc method.
Sudorem. i sudostr. no.2:44-52 '63. (MIRA 17:4)

1. Odesskiy institut inzhenerov morskogo flota.

GORBATYUK, Ye., general-leytenant aviatsii, Geroy Sovetskogo Soyuza

Profiting from the experience of outstanding pilots. Av.i kosm. 45 no.5:27-31 My '63. (MIRA 16:5)
(Flight training)

FD-3174

USSR/Physics - Adsorption

Card 1/1 Pub. 153-4/21

Authors : Gorbatyy, N. A. and Shuppe, G. N.

Title : The question of the dependence of adsorption bonds on a metallic single crystal upon crystallographic alignments

Periodical: Zhur. tekh. fiz., 25, No 8 (August), 1955, 1364-1375

Abstract : The authors investigate the adsorption of atoms of sodium, potassium and magnesium on a fused single-crystal of tungsten during the presence of a strong electric field. They found that the adsorbed atoms of potassium form dense coverings on faces (100) and (111), attaining the ability to complete these faces. The potassium atoms either are the least active in exciting the emission of electrons in the alignment (111) of a monocrystal of tungsten, or attain a small adsorption bond with the core in this region. Adsorbed atoms of magnesium form dense coverings on the faces (100) of a single-crystal of tungsten.

Submitted : April 21, 1955

GORBATYY, N.A.; SHUPPE, G.N.

Relationship between the adsorption bonds in metal single crystals and the crystallographic orientation (Na, K, Mg on W), Trudy (MLRA 9:5)
SAGU no.65:55-77 '55.
(Adsorption) (Metallography)

GORBATYY, N.A.; SHUPPE, G.N.

Evaporation of molybdenum and tungsten in strong electric fields.
Dokl. AN Uz. SSR no.12:13-16 '57. (MIRA 11:5)

1.Srednsaziatskiy gos. universitet im. V.I. Lenina. Predstavleno akad. AN UzSSR S.V. Starodubtsevym.
(Molybdenum--Electric properties)
(Tungsten--Electric properties)

AUTHOR: GORBATYY, N.A., RESHETNIKOVA, L.V., SYTAYA, E.P., SHUPPE, G.N. PA-2125

TILTE: The Electrostatic Emission from a Tantalum Monocrystal. (Elektrostaticheskaya emissiya s monokristalla tantala, Russian).

PERIODICAL: Zhurnal tekhn. Fiz., 1957, Vol 27, Nr 2, pp 296 - 298 (U.S.S.R.).

Received: 3 / 1957 Reviewed: 4 / 1957

ABSTRACT: Of the three metals with a high melting point, i.e. tungsten, molybdenum, and tantalum, which apparently have the same properties as regards the emission of electrons, tantalum has been only partly investigated. The present paper endeavors to provide new experimental material in order to be able to state with certainty that the images of thermo-electron- and electrostatic emission are quite the same in the case of all three metals. Besides, it is intended to obtain more complete images for the electrostatic emission of tantalum monocrystal. Spherical projectors with tantalum points were produced and the emission images of pure as well as of impure points were investigated. These images are attached in form of 6 photos. The images of the electrostatic emission of the tantalum point is, with the exception of one case, analogous to those obtained in the case of tungsten and molybdenum. The gases adsorbed by tantalum contaminate the surface in one or the other manner if the tantalum is heated from 1000 to 1700 - 1800°K. As the method employed is very sensitive the surface still

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The Electrostatic Emission from a Tantalum Monocrystal. PA - 2125

becomes contaminated from the interior within certain ranges of temperature in spite of the fact that the tantalum is most carefully cleansed. Treatment of the point by means of an "inverse field" leads to a considerable increase of the emission current also in the case of tantalum. (6 illustrations).

ASSOCIATION: Tashkent
PRESENTED BY:
SUBMITTED: 31.5.1956.
AVAILABLE: Library of Congress.

Card 2/2

GONBATYY, N.A.; RESHETNIKOVA, L.V.; SYTAYA, Ye.P.; SHUPPE, G.N.

Electrostatic emission from tantalum single crystals. Trudy SAGU no.91:39-42 '57. (MIRA 11:2)
(Tantalum) (Electron emission)

GORBATYY, N.A., Cand Phys-Math Sci--(diss) "On the problem of the effect of a strong electric field (~10^6 v/cm) on the evaporation and resistance of metals (Mo, Ta, W)." Tashkent, Publishing House of Central Asian State U, 1958. 14 pp with illS. (Min of Higher Education USSR. Central Asian State U im V.I. Lenin), 115 copies (KL,25-58, 106)

SOV/137-58-9-19717

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 9, p 228 (USSR)

AUTHORS: Gorbatyy, N.A., Shuppe, G.N.

TITLE: On the Problem of the Effect of a Strong Electric Field on the Resistance of Metallic Wires (K voprosu o vliyanii sil'nogo elektricheskogo polya na soprotivleniye metallicheskikh provolok)

PERIODICAL: Izv. AN Uzbek SSR. Ser. fiz.-matem. n., 1958, Nr 1, pp 65-73

ABSTRACT: An experimental investigation was conducted on the effect of a strong electrical field on the time variation in the resistance of incandescent fine W, Mo, and Ta wires. It is shown that a field of $\sim 10^6$ v/cm in a high vacuum ($\sim 10^{-8}$ mm Hg) has no effect on the resistance of Mo, Ta, and W wires and does not change their rate of evaporation. Also critically examined were the results of some works on the study of the rate of evaporation of metallic wires in a vacuum. Bibliography: 12 references.

R.O.

Card 1/1 1. Electric wire--Resistance 2. Electric fields--Applications

AUTHORS: Gorbatyy, N. A., Shuppe, G. N. 57-28-3-26/33

TITLE: On the Influence of a Strong Electric Field ($\sim 10^6$ V/cm) Upon the Evaporation and the Resistance of Metals (Mo, Ta, W)
(K voprosu o vliyanii sil'nogo elektricheskogo polya ($\sim 10^6$ v/sm) na isparenive i soprotivleniye metallov (Mo, Ta, W)

PERIODICAL: Zhurnal Tekhnicheskoy Fiziki, 1958, Vol. 28, Nr 3, pp. 623-635 (USSR)
Received: April 2[illegible]

ABSTRACT: In view of the contradictions in the data on the influence of electric fields upon the evaporation and the resistance of metals the authors according to different methods investigated the problem of the influence exerted by strong fields upon the evaporation of metals on good vacuum conditions and, insofar as the control of the increase in resistance is one of the most wide spread methods for the control of the evaporation of metallic wire, they also dealt with the problem of the influence of electric fields upon the resistance of the metals. The equipment and the electric circuit diagram of the testing plant are described. On the basis of the experiments described here the

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following is stated: 1) The direct measurements of the evaporated substance by weighing and according to the method of marked atoms showed that heterogeneous electric fields with a voltage of the order of magnitude of 10^6 V/cm in a good vacuum ($\sim 10^{-5}$ mm of mercury column) do not influence the evaporation velocity of molybdenum, tantalum and tungsten wires. This conclusion is also confirmed by the absence of an influence of strong fields upon the velocity of the increase of the resistance of molybdenum, tantalum and tungsten wires annealed in a good vacuum. 2) Strong electric fields (up to $2{,}6 \cdot 10^6$ V/cm) do not change the magnitude of the resistance of the metallic filaments. 3) According to the method of marked atoms the heat of evaporation of tungsten and tantalum as well as the velocities of evaporation at a number of temperatures were measured. The obtained data are in agreement with the data known from publications. 4) The modifications observed in the voltage drop at the filaments on the application of a strong electric field are caused by the presence of parasitic currents in the devices. (Mainly by the electrostatic emission from the pointed electrode edges). A careful analysis of the electric circuit diagrams of references 1, 2, 6 and 7 and of the construction of the devices used could in every individual case reveal the cause for the evident "in-

consistencies". Good vacuum conditions and the elimination of losses of any kind in general could eliminate any "inconsistencies" in the above-mentioned references.
There are 11 figures, 5 tables, and 11 references, 2 of which are Soviet.

ASSOCIATION: Sredneaziatskiy gosuniversitet, Kafedra elektrofiziki, Tashkent (Tashkent, Central Asiatic State University, Chair for Electrophysics)

SUBMITTED: June 1, 1957.

: 1. Metals--Vaporization 2. Metals--Resistance 3. Electric fields--Properties

GORBATYY, N.A.; GOFMAN, I.I.

Measurement of the work function of electrons using an electrostatic emission technique. Radiotekh. i elektron. 8 no.11:1927-1932 N '63. (MIRA 17:1)

L 51530-65 EWT(1)/EWT(m)/EWP(e)/EWP(i)/EPF(n)-2/EPR/EWP(t)/T/EWP(t)/EWP(b)/

ACCESSION NR: AP5

AUTHOR: Gorbatyy, N. A.; Ryabchenko, Ye. M.

TITLE: Behavior of cesium on single-crystal points of tantalum and tantalum carbide

SOURCE: Fizika tverdogo tela, v. 7, no. 4, 1965, 1150-1156

TOPIC TAGS: single crystal, tantalum, tantalum carbide, cesium activation, work function, heat of evaporation

ABSTRACT: The purpose of the investigation was to determine in greater detail the behavior of adsorption cesium films on the surface of pure tantalum and its carbide, and to determine quantitatively the change in the work function when these substances are treated in cesium vapor. An ordinary spherical autoelectronic projector was used in all experiments. Tantalum points were made of wire 150 μ in diameter by etching in melted KOH. The final points were smooth and sufficiently thin (~ 0.1 μ). The cesium vapor introduced into the projector was doubly distilled. The tantalum carbide point was prepared from the tantalum point by exposing the latter to benzene vapor. The work functions of the Ta--Cs and Ta_2C--Cs systems, with optimal coating, were 1.6 and 1.4 eV, respectively. The average heat of

Card 1/2

L 51539-65
ACCESSION NR: AP5010726

evaporation of Cs from Ta_2C was found to be 2.8 eV; the heat of evaporation of Cs from Ta is estimated at 2.5 eV. "The authors thank Professor G. N. Shuppe for valuable advice and a discussion of the results." Orig. art. has: 8 figures.

ASSOCIATION: Tashkentskiy gosudarstvennyy universitet im. V. I. Lenina (Tashkent State University)

SUBMITTED: 17Aug64 ENCL: 00 SUB CODE: SS

NR REF SOV: 006 OTHER: 000

Card 2/2

L 39911-66 EWT(m)/T/EWP(t)/ETI IJP(c) JG/JD
ACC NR: AP6015461 (N) SOURCE CODE: UR/0181/66/008/005/1441/1448

AUTHOR: Gorbatyy, N. A.; Khashimova, S.

61
B

ORG: Tashkent State University im. V. I. Lenin (Tashkentskiy gosudarstvennyy universitet)

TITLE: Emission and adsorption characteristics of the W-La system

SOURCE: Fizika tverdoto gela, v. 8, no. 5, 1966, 1441-1448

TOPIC TAGS: tungsten, lanthanum, field emission microscope, work function

ABSTRACT: The behavior of lanthanum on a monocrystalline tungsten edge was studied in a field emission microscope. With an increase in the degree of coating, the work function of the W-La film system passes through a minimum in the case of an optimum coating; the average work function for the optimum coating is equal to 2.2±0.1 ev. The average heat of evaporation of La from W is equal to 5.1±0.2 ev. An optimum coating of the W-La system is stable at 1400-1800°K. In this case, La reduces the work function of the (112), (111), and (116) faces of W most strongly. From the emission and adsorption characteristics, it follows that the system satisfies the criterion of suitability as a thermocathode: work function/heat of evaporation=2.2 ev/5.1 ev=0.41< <0.5. Orig. art. has: 8 figures.

SUB CODE: 20/ SUBM DATE: 23Sep65/ ORIG REF: 002/ OTH REF: 003

Card 1/1

ACC NR: AP7001724 SOURCE CODE: UR/0048/66/030/012/1942/1949

AUTHOR: Gorbatyy, N.A.; L'vov, G.V.; Perederiy, V.A.; Reshetnikova, L.V.; Pekhretdinov, F.A.

ORG: Department of Physical Electronics of Tashtent State University im. V.I. Lenin (Kafedra fizicheskay elektroniki Tashkentskogo gosudarstvennogo universiteta)

TITLE: Thermoelectron emission from hafnium and zirconium carbides

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 30, no. 12, 1966, 1942-1949

TOPIC TAGS: hafnium compound, zirconium carbide, carbide, thermionic emission, work function, electron emission, thermoelectron emission

ABSTRACT: In view of discrepancies in the published data on the thermoelectron emission from HfC and ZrC, the work functions, Richardson constants, and current densities were recalculated for those materials under rigorously controlled conditions. The HfC samples contained 94% metal, 5.3% bound C, and 0.40% free C, and their lattice constant was 4.632 KX. The ZrC samples contained 88.95% metal, 10.05% bound C, and 0.40% free C, and their lattice constant was 4.679 KX. The Richardson method was

Card 1/2 UDC: none

ACC NR: AP7001724

used for the measurements of the basic characteristics, and the thermoelectron constant was assumed to be 120.4 amp·cm^{-2}·deg^{-2}. In half of the samples the carbides were deposited directly on tantalum substrates, and in the other half on tantalum coated with $MoSi_2$. The work function of HfC on tantalum was found to be 3.0 eV, its Richardson constant 0.3 amp·cm^{-2}·deg^{-2}, current density at 1920K was 17.6 and at 2140K 137 mA·cm^{-1}, and its effective work function 3.75 eV. The corresponding values for HfC on $MoSi_2$ were 3.0 eV, 1.8 amp·cm^{-2}·deg^{-2}, 91 and 790 mA·cm^{-1}, and 3.75 eV. The work function of ZrC on tantalum was 2.7 eV, the Richardson constant 0.15 amp·cm^{-2}·deg^{-2}, current density at 1920K was 46 and at 2140K 306 mA·cm^{-1}, and the effective work function 3.85 eV. The corresponding values for ZrC on $MoSi_2$ were 3.0 eV, 0.7 amp·cm^{-2}·deg^{-2}, 36 and 286 mA·cm^{-1} and 3.87 eV. [ZL]

SUB CODE: 20/ SUBM DATE: none/ ORIG REF: 003/ OTH REF: 007/
ATD PRESS: 5114

Card 2/2

GORBATYUK, N.V.

Dosage of radioactive substances for internal therapeutic administration. Vest.rent. i rad. 31 no.3:21-26 My-Je '56. (MLRA 9:9)

1. Iz laboratorii biofiziki kafedry gospital'noy khirurgii (zav. - prof. A.M.Dykhno) Krasnoyarskogo meditsinskogo instituta.
(ISOTOPES, dosage,
in ther. introduction into organism (Rus))

GORBATYUK P. V.

USSR/Cultivated Plants - General Problems. I.

Abs Jour : Ref Zhur - Biol., No 10, 1958, 44006

Author : Gorbatyuk, P.V.
Inst : -
Title : Experience from the Work of the Berezov Variety Plot.

Orig Pub : Inform. Byul Gos. komis po sorto-ispyt. s.-kh. kul'tur M-va s. kh. SSSR, 1957, No 11, 24-29

Abstract : No abstract.

Card 1/1

KAMENETSKIY, B.G., kand.tekhn.nauk; GORBATYUK, V.A., inzh.

Improvement in the utilization of the power of TE3 diesel locomotives at high velocities. Elek.i tepl.tiaga 3 no.9: 23-25 S '59. (MIRA 13:2)
(Diesel locomotives)

GORBATYUK, Ye., general-leytenant aviatsii, Geroy Sovetskogo Soyuza, voyennyy letchik pervogo klassa

Schools of advanced experience. Av.i kosm. 45 no.10:34-38 '62. (MIRA 15:10)

(Flight training)

GORBATYY, M.

Use of mathematical methods in marine transportation research and practice. Mor. flot 24 no.9:12-13 S '64. (MIRA 18:5)

1. Glavnyy spetsialist otdela ekspluatatsii morskogo flota i portov Gosudarstvennogo proyektno-konstruktorskogo i nauchno-issledovatel'skogo instituta morskogo transporta Ministerstva morskogo flota SSSR.

GORBATYY, Yu. P.

"Aerodynamic Investigation of Rotating and Plane Turbine Cascade Models." Cand Tech Sci, Inst of Heat Power Engineering, Acad Sci Ukrainian SSR, Kiev, 1955. (KL, No 16, Apr 55)

SC: Sum. No. 704, 2 Nov 55 - Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (16).

PHASE I BOOK EXPLOITATION SOV/3898
SOV/31-M-14

Akademiya nauk UkrSSR. Institut teploenergetiki

Teploobmen i gidrodinamika (Heat Transfer and Hydrodynamics) Kiyev, 1958. 190 p. (Series: Its: Sbornik trudov, no. 14) 2,000 copies printed.

Eds. of Publishing House: Ya.I. Kaplan and N.M. Labinova; Tech. Ed.: M.I. Yerlnova; Editorial Board: I.T. Shvets (Resp. Ed.), Academician, Academy of Sciences UkrSSR; G.M. Shchegolev (Deputy Resp. Ed.), Candidate of Technical Sciences; N.M. Kondak (Resp. Secretary), Candidate of Technical Sciences; V.I. Tolubinskiy, Corresponding Member, Academy of Sciences UkrSSR; I.I. Chernobyl'skiy, Doctor of Technical Sciences; M.M. Nazarchuk, Candidate of Technical Sciences; P.I. Lavrov, Candidate of Technical Sciences; and P.D. Shvetsov, Professor; and N.M. Pratyakin, Candidate of Technical Sciences.

PURPOSE: This collection of articles is intended for scientific workers and technical personnel in the fields of heat transfer and hydrodynamics.

COVERAGE: This collection of 18 articles deals with experimental and theoretical studies of problems in heat transfer and hydrodynamics as they affect steam and gas turbines and heat-transfer devices. The results of theoretical investigations of heat transfer in turbine components and in elements of heat-utilizing apparatus are described, and new calculation methods are suggested. Several problems of the thermodynamics and aerodynamics of steam and gas turbines are discussed. References follow each article.

AVAILABLE: Library of Congress

Card 7/7

AC/mg/mh
7-28-60

SAYKOVSKIY, M.I., kand.tekhn.nauk; DORFMAN, A.Sh., kand.tekhn.nauk; GORBATYY, Yu.P., kand.tekhn.nauk

Selecting pitches for turbine bladings. Energomashinostroenie 5 no.3: 35-37 Mr '59. (MIRA 12:3)
(Turbines)

Gorbatyy, Yu.P.

26.5000

82130
S/124/60/000/002/005/012

Translation from: Referativnyy zhurnal, Mekhanika, 1960, No. 2, p. 49, # 1928

AUTHORS: Gorbatyy, Yu.P., Dorfman, A.Sh., Pol'skiy, N.Y., Saykovskiy, M.I.

TITLE: Aerodynamic Investigation of Exhaust Branch Pipe Models of a Gas Turbine

PERIODICAL: Sb. prats', In-t teploenerg. AN UkrSSR, 1959, No. 16, pp. 25 - 34 (Ukr., Russ. summary)

TEXT: Results of an aerodynamic investigation of models of a gas turbine exhaust branch pipe are presented. The branch pipe consists of a radical ring diffuser, being the main part of the branch pipe, the snail, and the diffuser outlet duct. Some variants of the branch pipe were examined with diffusers having different widening ratios. It turned out that the optimum widening ratio of the diffuser is close to three. The loss factor of this branch pipe proved to be $\xi_{loss} = 0.53$ (taking into account the losses with outlet velocity). The mounting of annular guide surfaces within the diffuser, aiming at a decrease in the diffuser opening angle, leads to a noticeably lowered loss. The application of such surfaces led in the present case to a decrease of the ξ_{loss} value down to 0.45 and to a pressure recovery factor $\varphi = 0.59$ (at the Mach number 0.4 at the branch pipe entrance

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V.Kh. Abiants

GORBATYY, Yu. P.

S/262/62/000/008/006/022
I007/I207

AUTHOR: Horbatyy, Yu. P.

TITLE: Aerodynamic investigation of rotating and flat models of turbine cascades

PERIODICAL: Referativnyy zhurnal, otdel'nyy vypusk. 42. Silovyye ustanovki, no. 8, 1962, 22, abstract 42.8.122. "Zb. prats. In-t teploenerg. AN URSR", no. 18, 1960, 57–62 (Ukr. Russian res.)

TEXT: Results are reported of a comparison between the aerodynamic characteristics of flat and rotating turbine cascades, and a physical analysis is made of the factors causing differences in operating efficiency of the cascade.

[Abstracter's note: Complete translation.]

Card 1/1

GORBATYY, Yu. P.

S/262/62/000/008/007/022
I007/I207

AUTHOR: Horbatyy, Yu. P.

TITLE: Some results of investigations on the flow in turbine stages

PERIODICAL: Referativnyy zhurnal, otdel'nyy vypusk. 42. Silovyye ustanovki, no. 8, 1962, 22, abstract 42.8.123. "Zb. prats. In-t teploenerg. AN URSR" no. 18, 1960, 63–67 (Ukr. Russian res.)

TEXT: The mechanism of formation of end-stage losses in a rotating reaction-blade cascade is analyzed; the cascade has no blade shrouding.

[Abstracter's note: Complete translation.]

Card 1/1

VIROZUB, I.YE. [Virozub, I.O.]; GORBATYY, Yu.P. [Horbatyi, IU.P.]; YEREMENKO, A.S. [IEremenko, O.S.]

Determining the characteristics of turbine lattices. Zbir. prats' Inst. tepl. AN URSR no. 20:28-35 '60. (MIRA 14:4)
(Turbines--Aerodynamics)

GORBATYY, Yu.P. [Horbatyi, IU.P.]

Influence of nonuniform flow on the work effectiveness of the rotating lattice. Zbir. prats' Inst. tepl. AN URSR no. 20:36-43 '60. (MIRA 14:4)

(Turbines--Aerodynamics)

YEREMENKO, Aleksandr Semenovna; VIROZUB, Ivan Yemel'yanovich; GORBATYY, Yuriy Pavlovich; MIRONENKO, Ivan Lazarevich; FEDOSENKO, Anna Petrovna; DYBAN, Ye.P., kand. tekhn. nauk, retsenzent; TITOVA, N.M., red. izd-va; LIBERMAN, T.R., tekhn. red.

[Experimental investigation of the aerodynamics of axial-flow turbomachines] Metody eksperimental'nogo issledovaniia aerodinamiki osevykh turbomashin. Kiev, Izd-vo Akad. nauk USSR, 1961. 129 p. (MIRA 15:5)
(Turbomachines--Aerodynamics)

PHASE I BOOK EXPLOITATION SOV/6059

Yeremenko, Aleksandra Semenovna, Ivan Yemel'yanovich Virozub, Yuriy Pavlovich Gorbatyy, Ivan Lazarevich Mironenko, and Anna Petrovna Fedosenko

Metody eksperimental'nogo issledovaniya aerodinamiki osevykh turbomashin (Methods for the Experimental Investigation of the Aerodynamics of Axial Turbomachines). Kiev, Izd-vo AN UkrSSR, 1961. 129 p. 2550 copies printed.

Sponsoring Agency: Akademiya nauk Ukrainskoy SSR. Institut teploenergetiki.

Ed. of Publishing House: N. M. Titova; Tech. Ed.: T. R. Liberman.

PURPOSE: This book is intended for technical personnel of scientific research institutes and plant laboratories concerned with problems of aerodynamic investigations of the components of the turbine flow-passage area.

COVERAGE: The book deals with some problems of the method of aerodynamic investigation of parts of steam and gas turbines, measuring technique, and the

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building of experimental models. It describes various types of instruments for measuring the parameters of two- and three-dimensional flows, methods of making and calibrating these instruments and also the manufacturing technology of model turbine blades. It describes also the most frequently used stands for investigating turbine blade cascades in stationary conditions and in motion. Candidate of Technical Sciences V. I. Pechuk assisted in the preparation of the first draft of the manuscript. The authors thank Ye. P. Dyban for his valuable remarks. There are 41 references: 39 Soviet, 1 English, and 1 French.

TABLE OF CONTENTS:

GORBATYY, Yu. P.

S/262/62/000/004/024/024
I014/I252

AUTHOR: Eremenko, O. S., Horbatyy, Yu. P. and Virozub, I. O.

TITLE: On radial equilibrium in a turbine rotor

PERIODICAL: Referativnyy zhurnal, Silovyye ustanovki, no. 4, 1962, 89, abstract 42.4.562. "Collection prats'. in-ta teploenerg" AN URSR, 1961, no. 22, 55–59

TEXT: An approximate method for determniation of flow parameters in a turbine rotor is considered with centrifugal and Coriolis accelerations taken into account. It was assumed that the liquid is ideal and non-compressible, the flow non-turbulent in absolute motion, and the cascade cylindrical. Approximate formulas were obtained for the dependence of velocity and pressure on the radius of the inter-blade channel section, and on the distance along the turbine axis.

[Abstracter's note: Complete translation.]

Card 1/1

GORBATYY, Yu. P.

S/526/62/000/024/007/013
D234/D308

AUTHORS: Virozub, I.O., Horbatyy, Yu.P., Yeremenko, O.S. and Fedosenko, H.P.

TITLE: Some results of the investigation of a ring grid

SOURCE: Akademiya nauk Ukrayins'koyi RSR. Instytut teploenerhetyky. Zbirnyk prats'. no. 24, 1962. Teploobmin ta hidrodynamika, 86-90

TEXT: The grid was studied in 9 sections along the height of the channel between the blades, with M = 0.5 and 0.8. The distance from the outlet edge plane to the point of measurement was 4.5 and 9 mm. Graphs of the variation of flow parameters, of the velocity coefficient and the stream outlet angle vs. channel height, pressure distribution along the profile (in the sections III, V, VI) and flow charts are given. M = 0.5 has better efficiency than M = 0.8. There are 4 figures.

Card 1/1

GORBATYY Yu. P.

S/526/62/000/024/008/013
D234/D308

AUTHORS: Virozub, I.O., Gorbatyy, Yu.P., Yeremenko, O.S. and Fedosenko, H.P.

TITLE: Aerodynamic investigations of a turbine stage with relatively short blades under varying operating conditions

SOURCE: Akademiya nauk Ukrayins'koyi RSR. Instytut teploenerhetyky. Zbirnyk prats'. no. 24, 1962. Teploobmin ta hidrodynamika, 91-97

TEXT: The ratio of mean diameter to blade length in the working wheel was 10.38. The flow parameters were measured before the first directional device, in the gap between it and the working wheel, and behind the working wheel, in seven sections along the channel heights. The air flow rate was constant for different numbers of revolutions. The full pressure remains nearly constant in the core of the stream and drops sharply near the outlet edge. The velocity of rotation did not affect the efficiency of the direction-

Card 1/2

al grid. The outlet angles decrease with increasing velocity coefficient. Energy losses are greatest near the blade ends. In the channels of the working wheel a considerable part of the working substance flows from the root towards the end, especially when the velocity of rotation increases. The experimental increase of the axial component of velocity is much larger than the calculated one. The rate of flow through different sections of a thin cylindrical layer of the working substance is not constant. There are 9 figures and 1 table.

Card 2/2

GORBATYY, Yu.Ye., inzhener.

Improving the quality of plugging cement. TSement 23 no.1:23-24 Ja-F '57. (MLRA 10:4)

(Cement)

S/072/62/000/004/001/002
B105/B101

AUTHORS: Epel'baum, M. B., Gorbatyy, Yu. Ye.

TITLE: Internal stresses and change of mechanical properties in glass

PERIODICAL: Steklo i keramika, 19 no. 4, 1962, 11 - 14

TEXT: The effect of a difference between the linear expansion coefficients of two phases was studied in glass containing spherulites. Gradually cooled glass of the Magnitogorskiy stekol'nyy zavod (Magnitogorsk Glass-works) contained spherulites of 8 - 10 mm diameter. Considerable internal stresses characterized by double refraction were detected around the spherulites. From the path difference of the beams measured with a Nikitin-Berek compensator the internal stress P was calculated by using the equation $P = \Delta/N\delta$, where $\Delta_{(m\mu)}$ is the path difference owing to double refraction, δ the thickness of the specimen in $m\mu$, and N the optical stress coefficient equated to $2.5 \cdot 10^{-7}$ kg/cm^2. It was found by means of a ПМТ-3 (PMT-3) unit that both microhardness and internal stress decrease as

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the distance from the spherulite increases. Since chemical analysis of the spherulite and the glass in its immediate neighborhood revealed no marked difference in composition, the internal stress can be explained by the difference between the thermal expansion coefficients of glass and spherulites. Removal of the spherulite from the glass by boring resulted in a decrease of the internal stress. There are 5 figures and 4 tables.

BRONSHTEYN, A.P.; ARKHANGEL'SKAYA, T.V.; TALISMAN, L.B.; GORBATYY, Yu.Ye.; EPEL'BAUM, M.B.

Physicochemical investigation of the thermal destruction process of some Kuznetsk Basin coals. Koks i khim. no.11:12-17 '62. (MIRA 15:12)

1. Chelyabinskiy metallurgicheskiy zavod (for Bronshteyn, Arkhangel'skaya). 2. Ural'skiy filial Akademii stroitel'stva i arkhitektury SSSR (for Talisman, Gorbatyy, Epel'baum).
(Kuznetsk Basin--Coal--Carbonization)

EPEL'BAUM, M. B.; GORBATYY, Yu. Ye.

Method of preparation of samples for measuring the microhardness of glasses. Zav. lab. 28 no.12:1492-1494 '62. (MIRA 16:1)

1. Ural'skiy filial Akademii stroitel'stva i arkhitektury SSSR.

(Glass—Testing) (Hardness)

BRONSHTEYN, A.P.; MAKAROV, G.N.; GORBATYY, Yu.Ye.; EPEL'BAUM, M.B.

Shrinkage and formation of phase stresses in coke. Koks i khim. no.8:22-27 '63. (MIRA 16:9)

1. Chelyabinskiy metallurgicheskiy zavod (for Bronshteyn). 2. Moskovskiy ordena Lenina khimiko-tekhnologicheskiy institut im. D.I.Mendeleyeva (for Makarov). 3. Ural'skiy filial Akademii stroitel'stva i arkhitektury (for Gorbatyy, Epel'baum).
(Coke)

TABOR, Peter, tudomanyos munkatars; LAKOSI, Laszlo, tudomanyos munkatars; GORBE, Imre, tudomanyos munkatars; BELLUS, Janos, tudomanyos segedmunkatars.

The spring 1961 Leipzig Fair as seen by a measuring technician. Meres automat 9 no.10:310-315 '61.

GORBELIK, R. V.

Gorbelik, R. V. "Material on the etiology and pathogenesis of alimentary ketonuria of pregnant sheep." Min Higher Education USSR. Saratov State Zootechnical-Veterinary Inst. Chair of the Pathology and Therapy of Internal Noninfectious Diseases of Agricultural Anamial. Chair of Pathological Anatomy. Saratov, 1956. (Dissertation for the Degree of Candidate in Veterinary Science)

So: Knizhnaya letopis', No. 27, 1956. Moscow. Pages 94-109; 111.

GORBELIK, R.V.

USSR/Physiology of Humans and Animals - Metabolism R-3

Abs Jour : Referat Zhur - Biologii, No 16, 1957, 70409

Author : Gorbelik, R.V.
Title : The Problem of Protein and its Fractions, and Urea Contents in Sheep Blood Under Reduced Protein Intake.

Orig Pub : Tr. Saratovsk. zpptechn.-vet. in-ta, 1956, 6, 172-175

Abstract : The influence of reduced protein rations on the contents of protein, protein fractions and urea in the blood of rams and ewes. Animals existing on rye straw, used with the feed 11.9gm of protein. The daily ration of control sheep consisted of 1.5 kg field hay and 0.5 kg mixed food, which included on the average 129.4 g digestible protein. After keeping the sheep for 2 months on low-protein ration the quantity of proteins in blood was lowered insignificantly, but considerable changes were observed in the interrelations of the protein fractions of the blood. Albumen fraction and fibrinogen decrease, globulin fraction increases.

Card 1/1 - 88 -

KOLESOV, A.M.; SOBELLIK R.V.; DEDERT'YEV, I.L.

Alimentary ketonuria in pregnant ewes. Veterinariia 33 no.10:68-71 O '56. (MLRA 9:10)

1. Saratovskiy zootekhnicheesko-veterinarnyy institut.
(Sheep--Diseases) (Liver--Diseases)

GORBELIK, V. I., Prof.

Voroshilov District - Stock and Stockbreeding

Achievements of the Ust'-Kurdyumskiy Veterinary Station. Sots. Zhiv. 15, No. 3, 1953.

Monthly List of Russian Accessions, Library of Congress, June 1953. UNCLASSIFIED.

MARKUSHIN, A.P., prof.; LADAN, P.Ye., prof.; GORBELIK, V.I., prof.; SHKUDOVA, R.I., red.

[Livestock breeding and specialized animal husbandry]Razvedenie sel'sko-khoziaistvennykh zhivotnykh i chastnoe zhivotnovodstvo. Izd.2., perer. i dop. Moskva, Kolos, 1965. 478 p. (MIRA 19:1)

1. Saratovskiy zooveterinarnyy institut (for Markushin, Gorbelik). 2. Donskoy sel'skokhozyaystvennyy institut (for Ladan).

GORBENKO, A., inzhener.

Experience in organizing centralized haulage of building materials. Avt.transp.34 no.5:13-14 My '56. (MLRA 9:9)

1.Zamestitel' upravlyayushchego trestom "Lishkhimpromstroy".
(Building materials--Transportation)

GORBENKO, A.A.

129-2-10/10

AUTHOR: Solov'yev, Candidate of Technical Sciences and Gorbenko, A.A., Eng. (Yaroslavl')

TITLE: Anti-Corrosion Treatment of Zinc Coated Components. (Antikorrozionnaya obrabotka otsinkovannykh detaley).

PERIODICAL: Metallovedeniye i obrabotka metallov, 1957, No. 2, pp 54-58, (U.S.S.R.)

ABSTRACT: The authors investigated the treatment of zinc coatings in solutions of Cr anhydride, sulphuric and hydrochloric acids; the specimens consisted of thin iron plates which were zinc coated in acid and in alkaline electrolytes according to process instructions given by Kudryavtsev, N.T. (1-4); the average thickness of the zinc layer was 10μ. The dissolution rate of zinc as a function of the holding time was verified in a solution containing 100 g/liter chromium anhydride, 1 cc/liter sulphuric acid, 100 cc/liter of hydrochloric acid at 18°C. The dissolution rate (Fig.1, p.54) is proportional to the oxidation time and the decrease in thickness of the zinc layer by 1μ takes about 25 secs. Fig. 2 shows the relation between the temperature of the solution during oxidation and speed

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TITLE: Anti-Corrosion Treatment of Zinc Coated Components. (Antikorrozionnaya obrabotka otsinkovannykh detaley).

of zinc dissolution. Fig. 3 shows the dependence of the change in the content of Cr anhydride in the solution on the oxidation surface of the component in dm^2 (For 1 liter of the solution). Fig. 4 shows the dependence of the change in the content of the trivalent Cr in the solution on the surface in dm^2 of the oxided component (for 1 liter of the solution). Fig. 5 shows the dependence of the change in the content of sulphuric and hydrochloric acids on the surface in dm^2 of oxidation of the component (for 1 liter of the solution). The Table, p. 56 gives the results of comparative tests of specimens in the errosion chamber for specimens treated in acidic and alkaline baths, and the Table on p. 57 contains instructions on the oxidation process of zinc coatings. On the basis of the data obtained in the corrosion chamber, it is concluded that the distribution of the specimens which are oxidized on the zinc, is less important than in anti-corrosion checking of surfaces which are only zinc coated when the main role is played not so much by the holding time but by the distribution of the components; a high degree of moisture condensation will bring about an increase of the corrosion activity. On the basis of positive results under factory conditions, the process here described

 of anti-corrosion treatment of zinc coated components in a solution of

129-2-10/10

TITLE: Anti-Corrosion treatment of Zinc Coated Components. (Antikorrozionnaya obrabotka otsinkovannykh detaley).

Cr anhydride hydrochloric and sulphuric acids has been in use in the Yaroslavl' Automobile Works since 1947. Analogous favourable results were also obtained by Bakhchisarayts'yan, N.G., Popkov, A.P., and Grinina, V.V. (6).

The text includes 5 graphs and 2 tables. All the 6 references are Slavic.

ASSOCIATION: Yaroslavl' Electromechanical Works (ЯЭМЗ) (Yaroslavskiy elektromekhanicheskiy zavod)

PRESENTED BY: ---

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Card 3/3

KHUKHRYANSKIY, P.N., doktor tekhn.nauk; GORBENKO, A.F., starshiy prepodavatel'; PLANIDA, V.Ye., inzh.

Experiments in the use of compressed wood in the manufacture of agricultural machinery. Trakt. i sel'khozmash. no.1:38-40 Ja '64. (MIRA 17:4)

1. Voronezhskiy lesotekhnicheskiy institut.

VENDEL'SHTEYN, B.Yu.; BUKANOVA, M.G.; GORBENKO, A.S.; ISHMETOV, M.G.; SKIBITSKAYA, N.A.; MANCHEVA, N.V.; SHVARTSMAN, M.D.; DAKHNOV, V.N., doktor geol.-miner. nauk, prof., red.; KUZ'MINA, N.N., ved. red.; POLOSINA, A.S., tekhn. red.

[Album of nomograms and charts for interpreting the data of geophysical methods for studying wells] Al'bom nomogramm i paletok dlia interpretatsii dannykh geofizicheskikh metodov issledovaniia skvazhin. Pod red. V.N.Dakhnova. Moskva, Gostoptekhizdat, 1963. 61 p. (MIRA 16:11)
(Prospecting--Geophysical methods)

TIMOFEYEV, Vladimir Andreyevich, prof., doktor tekhn.nauk; MORDOVIN, B.M., prof., retsenzent; RYABININ, I.A., dots., kand. tekhn. nauk, inzh.-kapitan III ranga, retsenzent; GAKKEL', Ye.Ya., doktor tekhn. nauk, prof., retsenzent; ARANOVICH, B.I., dots., kand. tekhn. nauk, retsenzent; GORBENKO, B.M., st. prepodavatel', retsenzent; GEKTOR, D.S., retsenzent; VOL'PE, L., red.

[Fundamentals of the theory of automatic control] Osnovy teorii avtomaticheskogo regulirovaniia; uchebnoe posobie. Leningrad, Severo-Zapadnyi zaochnyi politekhnicheskii in-t. No.2. 1962. 195 p. (MIRA 17:1)

1.Voyenno-morskaya akademiya korablestroyeniya i vooruzheniya imeni A.N.Krylova (for Mordovin,Ryabinin).

L 43984-66 EWT(l)/T IJP(c) JGS
ACC NR: AP6030147 SOURCE CODE: UR/0120/66/000/004/0154/0156

AUTHOR: Gorbenko, B. Z.; Granigg, A. B; Drozhbin, Yu. A.; Korinfskiy, D. F; Tolmachev, A. M.

ORG: none

TITLE: Moving-image camera with an electron-optical converter

SOURCE: Pribory i tekhnika eksperimenta, no. 4, 1966, 154-156

TOPIC TAGS: high speed camera, electrooptic camera

ABSTRACT: An FEP-1 photographic chronograph capable of recording events at speeds of 20-160 km/sec is described. The system is suitable for determining the luminescence time in GaAs crystal p-n junctions, and for recording high-speed transient processes associated with exploding wires and the electrical discharge in gases. The photochronograph consists of an optical system, an image converter, a two stage light amplifier, and the control circuits. The optical part has a mirror lens with a focal length and a relative aperture of 2000 mm and 1:10, respectively. A vertical time controlled slit in the focal surface of the input lens allows the light to reach the electron-optical converter cathode. After amplification by the converter, the image of the process under study is time swept, displayed on its screen, and then photographed on film. Each image on the film contains time marks whose error is not greater than ±0.4%. The electronic control circuits consist of a sweep generator

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(capable of forming 4 kv, 0.25 μsec pulses with a linearity error of less than 2%), a shutter pulse generator, a time mark generator (forming 3—5 μsec, 200 v pulses), starting and other auxilliary circuits. The time resolution of this system is at best 6×10^{-10} sec. Its spectral sensitivity range is from 4000 to 12000 A. The distortion of the photographed images does not exceed 7%. The installation measures 2200 x 470 x 700 mm. Orig. art. has: 3 figures. [BD]

SUB CODE: 14, 09/ SUBM DATE: 30Jun65/ ORIG REF: 005/ ATD PRESS: 5071

Card 2/2 UDC

GORBENKO, D.G.; TURIYEVSKIY, G.I.

The 190-SE two-drum magnetic separator. Biul.tekh.-ekon. inform. no.12:8-10 '61. (MIRA 14:12)
(Magnetic separation of ores--Equipment and supplies)

GORBENKO, D.G.; TURIYEVSKIY, G.I.

Machinery manufactured by the Voronezh Ore Dressing Equipment Plant. Biul. tekh.-ekon.inform.Gos.nauch.-issl.inst.nauch.i tekh.inform. no.3:3-6 '62. (MIRA 15:5)
(Voronezh—Ore dressing—Equipment and supplies)

GORBENKO, D.N.; FEDOROV, V.N.; GLADILIN, A.N., kandidat tekhnicheskikh nauk, nauchnyy redaktor; KOPTEVSKIY, D.Ya., redaktor; RAKOV, S.I., tekhnicheskiy redaktor.

[Machinist's handbook] Spravochnik slesaria. Moskva, Vsesoiusnoe uchebno-pedagog. izd-vo 1954. 226 p. (MLRA 7:10)
(Machine-shop practice)

GORBENKO, D.S. [Horbenko, D.S.]

Research and practice conference on the exchange of experience.
Farmatsev. zhur. 16 no.3:89-90 '61. (MIRA 14:6)

1. Apteka No.55 g. Vatutino, Cherkasskoy oblasti.
(CHERKASSY PROVINCE—PHARMACY)

L 60335-65 EWT(1)/EPA(s)-2/EPA(w)-2/EWA(m)-2

ACCESSION NR: AP5018295 UR/0057/65/035/007/1193/1201

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AUTHOR: Korsunskiy, M. I.; Gorbenko, E. N.

TITLE: Determination of some characteristics of an electronic-ionic oscillatory discharge

21

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 35, no. 7, 1965, 1193-1201

TOPIC TAGS: discharge tube, electron oscillation, ion oscillation, charge exchange, secondary emission

ABSTRACT: The authors have investigated the discharge in a longitudinal magnetic field between four plane parallel electrodes 6 cm apart of which the first carries at its center a hot filament and the second and third are provided with central openings. Electrodes 1 and 3 were kept at nearly the same potential and electrodes 2 and 4 were maintained at the same high positive potential with respect to them. The current to each electrode and the power dissipated at electrode 3 (due to ion impact) were measured in air at pressures from 5×10^{-4} to 10^{-3} mm Hg with applied potentials from 1 to 3 kV. The authors have described their apparatus in more detail elsewhere (ZhTF 35, 1265, 1965 [see abstract AP5018307]).

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ACCESSION NR: AP5018295

The processes occurring in such a discharge are discussed at some length and formulas are derived for calculating from the experimental data the following quantities: the fraction of the ions that execute a substantial number of oscillations through the openings in electrode 3; the average residual energy with which an ion finally strikes electrode 3; the secondary-electron emission coefficient; and the average number of ions produced by a single oscillating ion and its descendants arising from charge exchange collisions until the last descendant is captured on electrode 3 (the "multiplication factor"). These formulas are based on certain plausible assumptions concerning the pressure dependence of some of the quantities involved. The experimental data are compatible with these assumptions. It was found that the multiplication factor and the residual ion energy increased linearly with the applied potential and that the fraction of the ions that completed a substantial number of oscillations depended strongly on the size of the opening in electrode 3. With a 20 mm diameter opening in the electrode this fraction decreased from 0.5 to 0.2 when the applied potential was increased from 1 to 3 kV; when the opening was small (5.5 mm) the fraction of ions executing a substantial number of oscillations increased slightly with increasing applied potential. The average path length of such an ion and its charge exchange descendants was estimated to be 520 cm at 8×10^{-4} mm Hg with a

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